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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/720,744 | 11/25/2003 | Hyung-Joo Kang | 1793.1064 | 3111 |

21171 7590 02/27/2007
STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

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| EXAMINER |
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GUPTA, PARUL H

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| ART UNIT | PAPER NUMBER |
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2627

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|----------------------------------------|------------|---------------|
| 3 MONTHS | 02/27/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/720,744 | Applicant(s) KANG ET AL. | |
| | Examiner Parul Gupta | Art Unit 2627 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-23 are pending for examination as interpreted by the examiner. The arguments filed on 11/27/06 were considered for this application. There were no amendments to the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-3, 5, 7, 9-11, 13, 15, and 17-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagasato et al., US Patent 6,181,670.

Regarding claim 1, Nagasato discloses in figure 1 an optical pickup actuator, comprising: a blade (2) with an objective lens (1); a plurality of suspensions (122 and 124) coupled at one end to the blade and fixed at another end to a holder (6), provided at one side of a base (120), such that the suspensions movably support the blade; first (112) and second (114) coil members installed on the base, separated from each other; and a magnet member (116 and 118) installed on the blade between the first and second coil members.

Regarding claim 2, Nagasato discloses in figure 1 the optical pickup actuator of claim 1, wherein one of the first and second coil members is a focusing coil member, with the other being a tracking coil member (column 8, lines 59-64).

Regarding claims 3 and 5, Nagasato discloses in figure 1 the optical pickup actuator of claims 2 and 1, respectively, further comprising a pair of tilt driving coil members (column 8, lines 59-64).

Regarding claim 7, Nagasato discloses in figure 1 the optical pickup actuator of claim 1, wherein the magnet member (116 and 118) is a surface polarization magnet (polarization shown on magnet).

Regarding claim 9, Nagasato discloses an optical recording and/or reproducing apparatus (column 1, lines 7-17), comprising: an optical pickup having an actuator (shown in figure 1) for driving an objective lens (1), and movably installed in a radial direction of a recording medium (shown in figure 2), and records and/or reproduces information to/from the recording medium; and a controller controlling a focusing servo and a tracking servo of the optical pickup (explained to be conventional in column 1, line 66 to column 7, line 8), wherein the optical pickup actuator (shown in figure 1) includes: a blade (2) with an objective lens (1); a plurality of suspensions (122 and 124) coupled at one end to the blade and fixed at another end to a holder (6), provided at one side of a base (120), such that the suspensions movably support the blade; first (112) and second (114) coil members installed on the base, separated from each other; and a magnet member (116 and 118) installed on the blade between the first and second coil members.

Regarding claim 10, Nagasato discloses the optical recording and/or reproducing apparatus of claim 9, wherein one of the first and second coil members is a focusing coil member, with the other being a tracking coil member (column 8, lines 59-64).

Regarding claim 11, Nagasato discloses the optical recording and/or reproducing apparatus of claim 10, further comprising a pair of tilt driving coil members (column 8, lines 59-64).

Regarding claim 13, Nagasato discloses the optical recording and/or reproducing apparatus of claim 9, further comprising a pair of tilt driving coil members (column 8, lines 59-64).

Regarding claim 15, Nagasato discloses the optical recording and/or reproducing apparatus of claim 9, wherein the magnet member (116 and 118) is a surface polarization magnet (polarization shown on magnet).

Regarding claim 17, Nagasato discloses an optical pickup actuating method, comprising: moving a blade, including a lens, in tracking and/or focusing directions; and driving a coil system, separated from the blade (shown in figure 1), such that an interaction with a magnet on the blade controls the moving of the blade in the tracking and/or focusing directions (column 9, lines 4-17).

Regarding claim 18, Nagasato discloses the optical pickup method of claim 17, wherein the coil system includes a focusing coil member, mounted on a base separate from the movable blade (shown in figure 1), interacting with the magnet of the blade to control the moving of the blade in the focusing direction (column 9, lines 4-17).

Regarding claim 19, Nagasato discloses the optical pickup method of claim 17, wherein the coil system includes a tracking coil member, mounted on a base separate from the movable blade (shown in figure 1), interacting with the magnet of the blade to control the moving of the blade in the tracking direction (column 9, lines 4-17).

Regarding claim 20, Nagasato discloses the optical pickup method of claim 17, wherein the coil system includes focusing and tracking coil members, mounted on a base separate from the movable blade (shown in figure 1), interacting with the magnet of the blade to control the moving of the blade in the focusing and tracking directions (column 9, lines 4-17).

Regarding claim 21, Nagasato discloses the optical pickup method of claim 17, wherein the coil system drives the blade in an additional radial tilting direction (column 9, lines 4-17).

Regarding claim 22, Nagasato discloses the optical pickup method of claim 21, wherein the coil system includes focusing coil members, tracking coil members, and tilt driving coil members, all mounted on a base separate from the movable blade (shown in figure 1), interacting with the magnet of the blade to control the moving of the blade in the focusing and tracking directions (column 9, lines 4-17).

Regarding claim 23, Nagasato discloses a recording and/or reproducing method (explained as conventional), comprising: registering an electrical signal representative of data stored ("information signals"), or to be stored, on a recording medium; and performing the optical pickup actuating method of claim 19 to control the recording and/or reproducing of data to/from the recording medium to generate the electrical signal registered as the stored data, when performing the reproducing process, or to stored data on the recording medium based on the electrical signal, when performing the recording process (column 1, lines 19-44).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 4, 6, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasato in view of Choi, US Patent Publication 2003/0198148.

Nagasato teaches the actuator and recording/reproducing device with all of the limitations of claims 3, 5, 11, and 13. Nagasato does not teach the explicit need for tilt driving coil members that are installed under the focusing coil member.

Regarding claim 4, Choi teaches in figure 13(c) the optical pickup actuator, wherein the pair of tilt driving coil members (235c and 235d) are installed under the one coil member used as the focusing coil member (235a or 235b).

Regarding claim 6, Choi teaches in figure 13(c) the optical pickup actuator, wherein the pair of tilt driving coil members (235c and 235d) are installed under one of the first and second coil members that is used as a focusing coil member (235a or 235b).

Regarding claim 12, Choi teaches in figure 13(c) the optical recording and/or reproducing apparatus, wherein the pair of tilt driving coil members (235c and 235d) are installed under the one coil member used as the focusing coil member (235a or 235b).

Regarding claim 14, Choi teaches in figure 13(c) the optical recording and/or reproducing apparatus, wherein the pair of tilt driving coil members (235c and 235d) are

Art Unit: 2627

installed under one of the first and second coil members that is used as a focusing coil member (235a or 235b).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the concept of tilt driving members installed under focusing coil members as taught by Choi into the system of Nagasato. The motivation would be to accurately distribute current to improve the focusing movement force (paragraph 0096 of Choi) while reducing the amount of space taken up by the coils.

3. Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagasato in view of Choi, US Patent Publication 2003/0198148.

Nagasato teaches the actuator and recording/reproducing device with all of the limitations of claims 1 and 9. Nagasato does not teach the explicit need for fine pattern coils.

Regarding claim 8, Choi teaches the optical pickup actuator, wherein the first and second coil members are Fine Pattern Coils (FPCs) (paragraph 0055).

Regarding claim 16, Choi teaches the optical recording and/or reproducing apparatus, wherein the first and second coil members are Fine Pattern Coils (FPCs) (paragraph 0055).

It would have been obvious to one of ordinary skill in the art at the time of the invention to make the first and second coil members of Nagasato as Fine Pattern Coils as taught by Choi. This is an art recognized equivalent that is used in the same environment, for the same purpose, to achieve the same results.

Response to Arguments

4. Applicant's arguments filed 11/27/06 have been fully considered, but are moot in view of the new rejection.

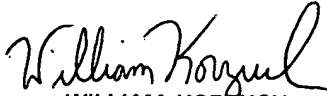
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parul Gupta whose telephone number is 571-272-5260. The examiner can normally be reached on Monday through Thursday, from 9:30 AM to 7 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PHG
1/29/06


WILLIAM KORZUCH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600